

REMARKS/ARGUMENTS

Claims 1 and 4-22 are presently pending, claims 2 and 3 having been canceled, without prejudice or disclaimer herein. Claim 2 was canceled since its content has been incorporated into amended claim 1. Claim 3 was canceled since it depends from canceled claim 2, and its content is now duplicated by claim 4. Claims 12-22 have been withdrawn from consideration.

Enclosed replacement sheets show a proposed addition of reference numeral “24” to Fig. 2 and a correction of the word “LINEARY” to “LINEARLY” in Fig. 1B.

Claims 1-2, 5 and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by Murakami Susumu et al., JP 10-117003. Reconsideration of the rejection is respectfully requested.

Independent claim 1 has been amended, in part, that “a plurality of stripes of a second conductivity type only [are] ... formed in a top surface of said epitaxial layer” (emphasis supplied). In contrast, Murakami Susumu et al. provides for positively doped regions 2 and 22 in the top surface of epitaxial layer 1, according to the Examiner, and positively doped regions 4 on the boundary between epitaxial layer 1 and substrate 3, according to the Examiner, (paragraph [0015]; Fig. 1, Office Action, page 2). Since claims 2, 5 and 11 are directly dependent upon independent claim 1, they are allowable over Murakami Susumu et al. for the same reasons recited above with respect to the allowability of claim 1 over Murakami Susumu et al.

Claims 1, 4-5 and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by Akiyama Yoshito et al., JP 03-024767. Reconsideration of the rejection is respectfully requested.

Independent claim 1 incorporates the feature of now canceled claim 2, which stated that the regions of the second conductivity type are stripes. The Examiner admits that Akiyama Yoshito et al. “does not explicitly disclose the regions 13 of the second conductivity type being stripes,” (Office Action, page 5). However, the Examiner contends that Dahlqvist et al., U.S. Patent No. 6,524,900, discloses such striped regions, and, “[t]herefore, it would have been obvious to form the regions 13 of the second conductivity type in the device of Akiyama Yoshito’s reference having a shape of a stripe, since the specification contains no disclosure of either the critical nature of the claimed shape or any unexpected results arising therefrom,” (Office Action, page 5).

Applicants respectfully disagree with the Examiner’s statement concerning the specification. The specification indicates that, contrary to conventional thinking in the design of

prior art MPS devices, which was to space the diffusions as close as possible to each other, it has been found that in an MPS device having shallow diffusion stripes, the diffusions should be spaced wider apart to improve the absorption of reverse avalanche energy and, thus, to improve the ability of the MPS device to withstand breakdown under reverse bias conditions.

“Specifically, it has been found that by appropriate adjustment of the distance between the diffusion stripes in an MPS, shallower diffusions can be used to achieve the same ability to withstand breakdown as a prior art device with a deeper diffusion well,” (specification, paragraph [0015]). Thus, the specification does indicate both the critical nature of diffusion stripes and the unexpected results arising therefrom. Since claims 4-5 and 11 are directly dependent upon claim 1, they are allowable over Akiyama Yoshito et al. for the same reasons recited above with respect to the allowability of independent claim 1 over Akiyama Yoshito et al.

Claims 1, 6, 9 and 10 were rejected under 35 U.S.C. §102(e) as being anticipated over Okada et al., U.S. Patent Application Publication US2004/0061195. Reconsideration of the rejection is respectfully requested.

As previously noted, independent claim 1, as amended, incorporates the feature of now canceled claim 2 that indicates that the regions of the second conductivity type are stripes. Okada et al. does not disclose, teach or suggest that the plurality of regions of a second conductivity type are stripes and the Examiner did not reject former claim 2 over Okada et al. Since claims 6, 9 and 10 are directly dependent upon independent claim 1, they are allowable over Okada et al. for the same reasons recited above with respect to the allowability of independent claim 1 over Okada et al.

Claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama Yoshito et al. in view of Dahlqvist et al. Reconsideration of the rejection is respectfully requested.

Since claims 2 and 3 have been canceled, without prejudice or disclaimer, this rejection has been overcome.

Claims 7-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Okada et al. Reconsideration of the rejection is respectfully requested.

Since claims 7-8 are directly dependent upon independent claim 1, they are allowable over Okada et al. for the same reasons recited above with respect to the allowability of independent claim 1 over Okada et al.

In view of the foregoing remarks, allowance of claims 1 and 4-11 is respectfully requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on July 26, 2005:

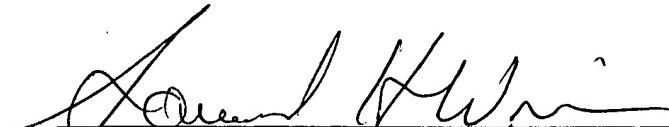
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Name of applicant, assignee or
Registered Representative

Signature
July 26, 2005

Date of Signature

Respectfully submitted,


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AMENDMENT TO THE DRAWING(S)

Please find enclosed replacement sheets for the sheets on which Figs. 1B and 2 appear, with proposed amendments thereon for the approval of the Examiner.